



**Widening & Comprehensive Development of Abbigere Main Road
from Renaissance Woods-3 Apartment to Abbigere Park.**



**ABSTRACT OF ESTIMATES,
DETAILED ESTIMATES & RATE ANALYSIS,**

Project Cost = 9.50 Crores

SEASON : JULY – 2020



NEZ INFRA TECH PRIVATE LIMITED

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1 Key Features and Summary of the Project Report

At a glance, this section of the status report summarizes the detailed project proposal report overview.

Name of the Project: Widening & Comprehensive Development of Abbigere Main Road from Renaissance Woods-3 Appartment to Abbigere Park

The general administrative information, existing road details, Improvement proposals, and estimated cost related to project road are shown in the **Error! Reference source not found.** to 1.5

1.1 General Detail and Administrative Approval

Brief information on General details of the Project road is given in Table 1-1 below.

Table 1-1 General Detail and Administrative Information

Sl. No	Description	Information	Page No.
1	Amount approved by Government under Escrow Account under BBMP 2020-21 Budget Statement of Payment Vide SL No 4 P-Code P-3075 under Discretionary grants –Rs 250Cr	Token Grant of : 950 Lakhs	15
2	Head of Account	Discretionary grants	
3	Revenue Village	Dasarahalli	
4	Hobali	K.R.Puram	
5	Taluk	Bengaluru North	
6	District	Bengaluru Urban	
7	Assembly Constituency	Dasarahalli	

Sl. No	Description	Information	Page No.
8	Parliamentary Constituency	Bangalore North parliamentary constituency	
9	Name of BBMP ward	Ward No. 14 - Bagalagunte Ward No 15 - T. Dasarahalli	
BBMP Authority			
10	Joint Commissioner	Dasarahalli Zone	
11	Executive Engineer	Road Infrastructure (RWD) NR Square Bengaluru	
12	Revenue officer	Dasarahalli Sub Division	
13	Assistant Revenue officer	T Dasarahalli Sub Division T Dasarahalli Sub Division	
14	DPR Consultants	M/s NEZ Infratech Privet Limited	
15	Police station (L&O)/(Traffic)	Gangamma Gudi Circle Police Station	
16	Emergency service fire & safety	Dasarahalli	
Utility Jurisdiction Details			
17	BESCOM Division Sub Division	North Division 5, T Dasarahalli	
18	Dasarahalli	North -5 T Dasarahalli	

1.2 Existing Road Condition

A quick view of the existing condition of the project road is illustrated in the Table 1-2 below.

Table 1-2 Existing road condition details

Sl No	Description	Information	Page No.
1	Length of Road	1230 m	18
2	Existing Right of way	8 m to 12 m	
3	Existing width of road	7m to 12m	
4	Single lane/Two lane	Single lane with Two way Traffic	
5	Vehicles per day- 0 TO 1230	31140 / 59644PCU	
6	Road type from 0 to 1230	Bitumen road	
7	Boundary on either side of road CH: 0 to CH:130	Private Land /Govt Land	
8	Religious Places	Crematorium on RHS	Affecting
9	Drain 0 to 1230	RCC /Stone masonry	
10	Land acquisition 0 to 1230	Private Land/Properties	
11	Tree existing & Cutting for widening	46 Nos	
12	Major Junction	1 Nos	

1.3 Improvement proposal

The improvement proposal detailed in the Chapter -6 is summarized in the Table 1-3 below for Quick review.

Table 1-3 Improvement Proposal of the Project Road

Sl No	Description	Information	Page No.
1	Length of Road	1230 m	60
2	EROW from CH 0 to CH 850 / 850 to 1230	10 to 15m	
3	PROW from CH 0 to CH 850 / 850 to 1230 after acquisition of Private Land	CH 0 to 850= 30m, CH 850 to 1230=18m	
4	As per BDA RMP-2015 Ch 0 to 850, Ch 850 to 1230	CH 0 to 850= 30m, CH 850 to 1230=18m	
5	Road Widening from CH: 0+000 to CH:850 & Ch 850 to 1230	30m & 18 m	
6	Type of road proposed	Bitumen Road	
7	Thickness Length & width of Bituminous Road CH: 0+000 to CH:1230	30mm BC/50mm/DBM/250mm WMM/200 mm GSB/200mm Subgrade, for Service road same except GSB is 150mm	
8	Road widening from CH: 850 to CH:1230	Widening on either side	
9	Dismantling of RCC Drain /Buildings for Road widening	Ch 850 to 1230 & Residential/Commercial Buildings on either sides	
10	New RCC Drain proposed	Ch 0 to 1230	
11	Proposal of Utility duct cum Foot path from CH: 0+000 to CH:1230	Provision is made for Utility duct cum Footpath	

SI No	Description	Information	Page No.
12	Proposal of Drain and Footpath from CH:0 to CH:1230	Foot path cum Utility duct & Drain	

1.4 Cost Estimate

After detailed study and design, the project cost has been arrived and detailed in this report at Chapter - 7 and for quick reference; Summary of the Project Cost is shown in the Table 1-4 below.

Sl. No	Descriptions of Provisions	Amount (Rs.)	Percentage (%) of Components
1	Site Clearance & Dismantling (Bill No. 1)	34,29,884.05	4.37
2	Earth work for Excavation & Subgrade (Bill No. 2)	34,32,415.67	4.38
3	Concrete of all grade and Steel Work for Drain, Manhole, Basement for Street Light Pole (Bill No. 3)	2,11,24,474.20	26.94
4	Sub Base work for GSB & WMM (Bill No. 4)	1,47,10,043.36	18.76
5	Masonry and Finishing works for Footpath, Kerb, utility Duct etc (Bill No. 5)	1,95,16,786.77	24.89
6	Base and Surface work for DBM & BC (Bill No. 6)	1,22,86,180.00	15.67
7	Pavement marking and Road Appurtenances (Bill No. 7)	14,17,194.12	1.81
8	Electrical works for laying LT Cable for LED Street Lights. (Bill No. 8)	10,03,423.33	1.28
9	Construction of Recharge pits for Rain water Harvesting (Bill No. 9)	1,42,664.34	0.18
10	Tree Plantation and Transplantation (Bill No. 10)	13,49,686.48	1.72
11	Amount Put to Tender = Sub Total A	7,84,12,756.35	100.00
12	Add GST 12 % on Sub Total A = Sub Total B	94,09,530.76	
13	Provision for Consultancy service for preparation of Detailed project Report (DPR) including Topographical survey using Drone implementing LIDAR technology, Road & Structure inventory, Carrying out Geo technical investigation, Traffic Survey, Falling Weight Deflectometre (FWD).	4,85,000.00	
14	Provision for Tender premium of 5% on Sub Total A	39,20,637.62	
15	Provision for GST of 12% on Tender premium (Sl. No 15)	4,70,476.54	
16	Provision for Consultancy service for Project Management, Validation of DPR, Construction support, issue of good for construction drawings, Preparation of Detailed Land Acquisition Plan & Schedule, by adopting Aerial Survey using Drone / UAV implementing LIDAR technology, Joint Measurement Survey (JMS), Preparation of Alignment Registers and documents for Processing TDR as per the standard of BBMP Revenue Department <i>shifting and utility</i>	23,01,599	
17	Sub Total C	71,77,712.90	
18	Grand Total for the Project = (Sub Total A+B+C)	9,50,00,000.00	

Rupees Nine Crore Fifty Lakhs Only

Table 1-4 Summary of the Project Cost

2 Introduction

2.1 Background

Bangalore is one of the fastest growing cities in the world and its growth is related to its pleasant climate, resource availability, pleasant manner and its tradition. Providing civic needs, keeping the city clean and maintaining a calm climate is a major concern for the authorities.

The absence of natural barriers has encouraged the turbulent stretches of the city in all directions. The extraordinary increase in population, the uninterrupted expansion of the city and the high concentration of economic activity has led to a sudden increase in the number of motor vehicles using the road system.

The limited road space available is suffocating day by day. The rise of commercial and industrial activities has added additional demand to the existing road-based urban transport system. The lack of mass transit and other related facilities has led to an alarming increase in personalized mode.

The Project Abbigere Main Road in Dasarahalli Division was a former City Municipal Council. But, now it is officially merged to Bruhat Bangalore Mahanagara Palike. Dasarahalli is also an Assembly Constituency after delimitation of Assembly constituencies.

The project road, which is an inner city of Sub Arterial road, is very narrow with private land on either sides, and the widening of the road should be taken into account to address the current situation.

2.2 Project Location

The Project road Abbigere Main Road in Dasarahalli presently under consideration for widening is inner road of city and proximate to NH-4, Hesaraghatta and leads to ORR and Whitefield road. Location of Project Road is shown in Figure 2-1 and Figure 2-2.



Figure 2-1 Route Map Showing Location of Project Road



Figure 2-2 Project Road Location Showing in Google Earth

2.3 Objective of the Project

Bruhat Bengaluru Mahanagara Palike (BBMP) has taken up an ambitious plan of upgrading the Arterial, Sub arterial road and Major roads in the city with comprehensive development.

According to the BDA Comprehensive Development Plan, this project road is located in the inner Dasarahalli. Traffic congestion is one of the major problems in this planning district;

The revised Master Plan 2015 of BDA proposes programs and projects that could be implemented for the geometric improvement of some roads in this Makalli district, including the Abbigere main road from Renaissance Woods apartment to to Wamac Junction and from wamac junction to Abbigere main road via Ganngamma Gudi police station.

T-Dasarahalli in Jalahalli West is an upcoming locality in the northern part of Bangalore. It is one of the beautiful places surrounded with lush greenery. Gangamma Circle is the junction between the roads connecting Jalahalli East-West-Cross intersects. The National Academy of Customs and Narcotics, Bangalore is located in this area. The east region of this locale boasts Jakarbandi State Forest. Top companies like Bharat Electronics Limited (BEL), Hindustan Machine Tools (HMT), CMTI and other PSUs exist here. The presence of private industries, including Bharat Fritz Werner Ltd (BFW), the packaging unit of Tata Tea Ltd and other small-scale industries has attracted many working people to settle in and around this area. Jalahalli East Air force station is situated between MS Palya and Gangamma Circle.

The chosen project road is a narrower road and has a traffic density. Road widening is necessary to ease the traffic congestion and to increase the traffic capacity of the existing narrow road.

The Karnataka Government has directed the BBMP to study the proposal for up gradation/improvement of present existing main road of T Dasarahalli for a length of 850m from Renaissance Wood Apartment to Abigere Main road upto Gangamma Gudi Police Station to de congest the traffic as the development taken place in and around the city of Dasarahalli. Hence, a detailed planning report is required for widening of Abbigere Main Road from Renaissance Woods apartment to Abbigere Park for a length of 1230m

BBMP has entrusted the work to prepare a detailed project report for this project road to M/s NEZ Infratech Pvt Ltd .The project report is prepared with the following details.

2.4 Objective of the Study

The primary objectives of the study are:

1. Conduct necessary surveys and investigations to arrive for improvement of traffic movement by widening of this road.
2. Suggest an improvement scheme for widening of road to reduce traffic congestions and delays.
3. Prepare Cost Estimate and Bidding documents

2.5 Project Scope

The scope of the consultancy study involves the following:

- i. Detailed Topographical Survey
- ii. Road inventory and Pavement condition survey
- iii. BBD/Deflection test and sub grade soil investigations
- iv. Existing R-O-W mapping (Building to Building)- Cross section detailing & Strip plan with entry exist mapping
- v. Identification of existing utility lines on survey drawing
- vi. Design of alignment,median,kerbs,driveway and pedestrian walk way/side walk
- vii. Pavement evaluation and design of pavement
- viii. Proposal for Relocation of utilities and provision for utility ducts
- ix. Proposal for pedestrian subway/skywalks
- x. Cost Estimation and Bill of Quantities
- xi. Action plan for implementation and completion of project.
- xii. Power Point Presentation, meetings and discussions on the project at various levels
- xiii. Preparation of Technical Specifications and tender documents

Detailed Project Report including above scope of work has been prepared as part of the scope.

2.6 Broad Methodology

Below are the broad methods adopted in the present study to arrive at a viable solution for widening the road to improve traffic the flow.

1. Study the existing traffic flow.
2. Study traffic turning movements at the junction location.
3. Access existing utilities in the project area in planning alignment.

4. Design of road to improve the traffic
5. Quantity and Cost estimate for the widening scheme.

2.7 Deliverables

As part of a detailed project report, the following are proposed to be submitted according to TOR's reporting.

VOLUME -I: Main Report

Chapter 1: Key Features and Summary of the Project Report

Chapter 2: Introduction

Chapter 3: Surveys and Investigations

Chapter 4: Traffic Surveys and Analysis

Chapter 5: Design Standards.

Chapter 6: Improvement Proposals

Chapter 7: Project Cost

VOLUME -II: Drawings

- (i) Key map
- (ii) Strip Plan
- (iii) Road Profile Plan
- (iv) Typical Cross Sections
- (v) Standard Drawings
 - a. Typical Details of Drain
 - b. Sign Boards
 - c. Lane Marking
- d. Miscellaneous Details

VOLUME -III: Specifications and Tender Document

3 Survey and Investigation

3.1 General

The prescribed engineering surveys and investigations have been carried out on the Project Road conforming to MORTH/IRC/BIS Specifications /Tender sure Guidelines /Codes as per TOR to generate adequate database for preparing the most appropriate widening proposal of project road. As part of the study, consultants carried reconnaissance, inventory, traffic surveys, pavement condition surveys, BBD surveys and secondary data collection at above mentioned roads. These surveys have been carried out on the Project corridors in the month of June 2020 to assess the adequacy and effectiveness of existing pavement in serving the present and future traffic needs. The Study and Investigations will be conducting in accordance with the Scope of Work entrusted to the Consultants. Following are the various engineering surveys and investigations other than traffic surveys. The scope of works includes but not limited to:

- Field Reconnaissance (Road Inventory).
- Road Inventory and Condition Survey (Visual Observation).
- Pavement Structure and Strength (BBD Survey).
- Topographic Survey.

The consultants visited the site along with BBMP authority accompanied by concerned Executive engineer and with his team to acquaint the site and to study the various site related constraints which should be kept in mind while preparing the various alternative solutions for widening of road to improve the traffic flow.

2 Field Reconnaissance Survey

The consultants have made a study of the available land width (ROW), topographic survey maps of the project area and other relevant information collected. A detailed reconnaissance survey has been conducted on the total section of the project road and an assessment of possible alignment change at places, if required, has also been made. Detailed features such as land-use, habitation, water routes, intersecting roads, railway lines, utilities such as OFC Cables, electrical lines (HT / LT), etc. have also been noted down. This has enabled the Consultants to visualize the possible problems likely to be encountered in surveys and investigations as well as in design, and execution of the project. The detailed ground reconnaissance of project influence area has been utilized for planning and programming the detailed surveys and investigations. Identification of locations has been carried out with respect to carry out the traffic survey, and inspection of utility service lines to know the user department for joint inspection. During the survey, planning for undertaking to carry out a related study of road inventory and condition surveys was also assessed.

3.3 Road Inventory and Pavement Condition Survey

3.3.1 Road Inventory Survey

The purpose of the road inventory survey was to record the essential road elements and features of the project road along the existing alignment. The inventory survey was carried out by visual inspection (walking) and measuring the elements along the entire project road at every 50m interval. Inventory survey details collected is presented in Table 3 1 and Inventory photos are shown in Figure 3 1

Table 3-1 Road Inventory Survey for Abbigere Main Road

Chainage		Terrain	Land Use	EROW (m)	Carriage way Drain to Drain (M)		Median width/ Type	Road Drainage LHS (M)		Road Drainage RHS (M)		Foot Path LHS (M)		Foot Path RHS (M)		Utility Type		Inter section Type	Remarks General Information
					Width	Type		Width	Type	Width	Type	Width	Type	Width	Type	LHS	RHS		
0	50	P	R	19.25	12.31	BT	No median	Nil		Nil		Nil		Nil		2 MH		1	
50	100	P	R	29.5	10.7	BT	- do -	- do -		- do -		- do -		- do -		3 MH		3	
100	150	P	R	21.14	8.32	BT	- do -	- do -		- do -		- do -		- do -		2 MH			
150	200	P	R, Govt, Cemetery	16.19	8.74	BT	- do -	- do -		- do -		- do -		- do -		1 MH			
200	250	P	O, Cemetery	15.2	8.69	BT	- do -	- do -		- do -		- do -		- do -		2 MH			
250	300	P	O, Cemetery, Park	13.66	8.93	BT	- do -	- do -		- do -		- do -		- do -		1 MH			
300	350	P	O, Park	13.51	7.77	BT	- do -	- do -		- do -		- do -		- do -		1 MH			
350	400	P	R, Park	17.67	8.22	BT	- do -	- do -		- do -		- do -		- do -		Culvert			
																2 MH			
400	450	P	R, Park, College, C	19.14	9.13	BT	- do -	- do -		- do -		- do -		- do -				2	
450	500	P	O, R, C	19.64	9.98	BT	- do -	- do -		- do -		- do -		- do -		1 MH		1	
500	550	P	O, R, C	20.06	9.65	BT	- do -	- do -		- do -		- do -		- do -		2 MH		2	
550	600	P	O	19.7	9.84	BT	- do -	- do -		- do -		- do -		- do -		small Culvert		2	
																2 MH			
600	650	P	R, Cemetery, C	11.58	8.54	BT	- do -	- do -		- do -		- do -		- do -					

Stationing	Type	Notes	Land Use	Structure	Length (ft)	Percentage of Roadway		Surface Type	Roadway Width (ft)		Roadway Right of Way (ft)		Foot Path LWR (ft)		Foot Path RWR (ft)		Utility Type		Inter section Type	Remarks
						Width	Type		Width	Type	Width	Type	Width	Type	Width	Type	LWR	RWR		
800	800	P	R Commercial	11.13	8.21	BT	-	-	-	-	-	-	-	-	-	-	1161			
800	800	P	R Commercial	11.1	8.21	BT	-	-	-	-	-	-	-	-	-	-	1161			
800	800	P	R C Commercial	10.83	8.21	BT	-	-	-	-	-	-	-	-	-	-	1161		1	
800	800	P	R C	11.83	8.21	BT	-	-	-	-	-	-	-	-	-	-	1161		2	
800	800	P	R C	13.4	10.12	BT	-	-	-	-	-	-	-	-	-	-	1161	1161	1	
800	800	P	C R C	13.80	10.83	BT	-	-	-	-	-	-	-	-	-	-	1161		1	
800	800	P	R	13.83	9.04	BT	-	-	-	-	-	-	-	-	-	-	1161			
800	800	P	R (Oak)	14.08	8.89	BT	-	-	-	-	-	-	-	-	-	-	1161			
800	800	P	C (Oak)	13.70	9.84	BT	-	-	-	-	-	-	-	-	-	-				
1100	1100	P	C (Oak Park)	13.82	10.44	BT	-	-	-	-	-	-	-	-	-	-	1161		1	
1100	1200	P	C Park	10.3	10.42	BT	-	-	-	-	-	-	-	-	-	-				
1200	1200	P	C Park	10.03	10.01	BT	-	-	-	-	-	-	-	-	-	-				
1200	1270	P	C Park/Police station	15.51	10.15	BT	-	-	-	-	-	-	-	-	-	-			1	

Terrain: P/Pan R/Rolling H/Hills Land Use: B Built up, O Open Land I Industrial R Residential C Commercial Surface Type: BT Black top CG Concrete E Earthen

Inter section Type: 3 Arched 4 4 Arched 5 Arched R Arched Structure: C Culvert, B Bridge, RCD Road over Drain, RCDAB Road over Bridge